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22046	7590 06/09/2005		EXAMINER		
LUCENT TECHNOLOGIES INC. DOCKET ADMINISTRATOR 101 CRAWFORDS CORNER ROAD - ROOM 3J-219			MOORE JR, MICHAEL J		
			ART UNIT	PAPER NUMBER	
HOLMDEL,	HOLMDEL, NJ 07733		2666		
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Please find below and/or attached an Office communication concerning this application or proceeding.

		Application No.	Applicant(s)				
Office Action Summary		09/748,427	BURROUGHS ET AL.				
		Examiner	Art Unit				
		Michael J. Moore, Jr.	2666				
	The MAILING DATE of this communication appears on the cover sheet with the correspondence address Period for Reply						
THE - Exte after - If the - If NC - Failu Any	ORTENED STATUTORY PERIOD FOR REPLY MAILING DATE OF THIS COMMUNICATION. Insions of time may be available under the provisions of 37 CFR 1.13 SIX (6) MONTHS from the mailing date of this communication. Period for reply specified above is less than thirty (30) days, a reply period for reply is specified above, the maximum statutory period were to reply within the set or extended period for reply will, by statute, reply received by the Office later than three months after the mailing ed patent term adjustment. See 37 CFR 1.704(b).	36(a). In no event, however, may a reply be tim  within the statutory minimum of thirty (30) days will apply and will expire SIX (6) MONTHS from  cause the application to become ABANDONE	ely filed  will be considered timely. the mailing date of this communication.  33 U.S.C. § 133).				
Status							
1)  🂢	Responsive to communication(s) filed on 23 Fe	ebruary 2005.					
· <u> </u>	This action is <b>FINAL</b> . 2b)⊠ This action is non-final.						
3)□	Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under <i>Ex parte Quayle</i> , 1935 C.D. 11, 453 O.G. 213.						
Dispositi	ion of Claims						
<ul> <li>4)  Claim(s) 2-8,10,11,13-18,20,22-25,27-29,31,34,36-40,42 and 43 is/are pending in the application.</li> <li>4a) Of the above claim(s) is/are withdrawn from consideration.</li> <li>5)  Claim(s) is/are allowed.</li> <li>6)  Claim(s) 2-8,10,11,13-18,20,22-25,27-29,31,34,36-40,42 and 43 is/are rejected.</li> <li>7)  Claim(s) is/are objected to.</li> <li>8)  Claim(s) are subject to restriction and/or election requirement.</li> </ul>							
Applicati	ion Papers						
10)⊠	The specification is objected to by the Examine The drawing(s) filed on <u>26 December 2000</u> is/a Applicant may not request that any objection to the Replacement drawing sheet(s) including the correct The oath or declaration is objected to by the Ex	re: a) $\square$ accepted or b) $\square$ objected or by accepted or by accepted in abeyance. See ion is required if the drawing(s) is objected.	37 CFR 1.85(a). ected to. See 37 CFR 1.121(d).				
Priority u	under 35 U.S.C. § 119						
<ul> <li>12) Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).</li> <li>a) All b) Some * c) None of:</li> <li>1. Certified copies of the priority documents have been received.</li> <li>2. Certified copies of the priority documents have been received in Application No</li> <li>3. Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).</li> <li>* See the attached detailed Office action for a list of the certified copies not received.</li> </ul>							
Attachmen	t(s)						
1) Notice of References Cited (PTO-892)  4) Interview Summary (PTO-413)							
3) 🔲 Inform	e of Draftsperson's Patent Drawing Review (PTO-948) mation Disclosure Statement(s) (PTO-1449 or PTO/SB/08) r No(s)/Mail Date	Paper No(s)/Mail Da 5) Notice of Informal Pa 6) Other:	te atent Application (PTO-152)				

#### **DETAILED ACTION**

## Claim Rejections - 35 USC § 112

- The following is a quotation of the second paragraph of 35 U.S.C. 112:
   The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.
- 2. Claims **3**, **6-8**, **13-18**, **22-25**, **28**, **29**, **31**, **34**, **38-40**, **and 43** are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.
- 3. Claims **3**, **6-8**, **13-18**, **22-25**, **28**, **29**, **31**, **34**, **38-40**, **and 43** recite the limitation "The invention as defined" in line 1 of each of these claims. There is insufficient antecedent basis for this limitation in these claims.
- 4. Claim 25 recites the limitation "said stored upstream channel identifier" in lines 3-
- 4. There is insufficient antecedent basis for this limitation in the claim.
- 5. Claim **43** recites the limitation "a receiver which receives said at least one parameter which is supplied from said cable modem" in lines 2-3. There is insufficient antecedent basis for this limitation in the claim. This claim currently depends on cancelled claim **41**.

## Claim Rejections - 35 USC § 102

6. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless -

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States

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only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

7. Claims **5, 20, and 22-25** are rejected under 35 U.S.C. 102(e) as being anticipated by Daruwalla et al. (U.S. 6,839,829) ("Daruwalla"). Daruwalla teaches all of the limitations of the specified claims with the reasoning that follows.

Regarding claim **5**, "storing an indication of an alternative downstream channel" is anticipated by the registration parameters (indication) for the protection CMTS obtained and stored by the cable modem as spoken of on column 10, lines 36-41. "Detecting that the primary downstream channel has become invalid" is anticipated by the cable modem detecting a failure as spoken of on column 14, lines 1-3.

"Switching to employ the alternative downstream channel in lieu of the primary downstream channel whereby reinitialization of the cable modem is not required" is anticipated by the cable modem connecting to the protection CMTS after loading previously stored protection path parameters from initial registration as spoken of on column 14, lines 5-12. Lastly, "ranging and registering with a cable modem terminating system (CMTS) supplying the alternative downstream channel prior to performing the detecting and switching steps" is anticipated by the registration parameters for the protection CMTS obtained (ranging and registering) and stored by the cable modem in preparation for a cutover event as spoken of on column 10, lines 36-41.

Regarding claim **20**, "a first memory location storing an indication of a first channel to be used by the cable modem as its primary downstream channel" is anticipated by the cable modem (first memory location) obtaining registration parameters from the working CMTS as spoken of on column 10, lines 27-32. "A second

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memory location storing an indication of a second channel to be used by the cable modem as its alternative downstream channel" is anticipated by the registration parameters (indication) for the protection CMTS obtained and stored by the cable modem as spoken of on column 10, lines 36-41.

Lastly, "a third memory location storing at least one parameter determined during an initialization process of the cable modem in conjunction with a cable modem terminating system (CMTS) supplying the alternative downstream channel, the initialization process being performed prior to the primary downstream channel becoming invalid" is anticipated by the registration parameters for the protection CMTS obtained (ranging and registering) and stored by the cable modem in preparation for a cutover event as spoken of on column 10, lines 36-41.

Regarding claim **22**, "a transmitter for transmitting the at least one parameter to a second CMTS supplying the alternative downstream channel" is anticipated by the transmission of a ranging request by the cable modem to the protection CMTS as spoken of on column 14, lines 48-55.

Regarding claim 23, "a detector that determines that the primary downstream channel is invalid" is anticipated by the cable modem (detector) detecting a failure as spoken of on column 14, lines 1-3. Lastly, "a frequency adjustable receiver tuner that changes from the first channel to the second channel when the detector determines that the primary downstream channel is invalid" is anticipated by the cable modem (frequency adjustable receiver tuner) connecting to the protection CMTS after loading

previously stored protection path parameters from initial registration as spoken of on column 14, lines 5-12.

Regarding claim **24**, "a frequency adjustable transmitter tuner that tunes to a new upstream channel in response to a received upstream channel message" is anticipated by the cable modem (frequency adjustable transmitter tuner) connecting to the protection CMTS after loading previously stored protection path parameters from initial registration upon announcement of a failure (step 711 of Figure 7) as spoken of on column 14, lines 5-12.

Regarding claim **25**, "the frequency adjustable transmitter tuner tunes to the new upstream channel in response to the received upstream channel message as a function of the stored upstream channel identifier" is anticipated by the cable modem (frequency adjustable transmitter tuner) connecting to the protection CMTS after loading previously stored protection path parameters from initial registration upon announcement of a failure (step 711 of Figure 7) as spoken of on column 14, lines 5-12.

8. Claims 27-29, 31, 34, 36-40, 42, and 43 are rejected under 35 U.S.C. 102(e) as being anticipated by Sawyer et al. (U.S. 6,765,925) ("Sawyer"). Sawyer teaches all of the limitations of the specified claims with the reasoning that follows.

Regarding claim 27, "means for receiving as an input at least one parameter for cable modem service provided between a cable modem and a second CMTS which is initially serving the cable modem, the at least one parameter being established during initialization of the cable modem service between the cable modem and the second CMTS" is anticipated by communication module 27B (means) of protection CMTS 14B

of Figure 3A that receives state information (parameters) pertaining to the cable modem from communication module 27A of working CMTS 14A as spoken of on column 6, lines 42-50.

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"Means for establishing cable modem service between the first CMTS and the cable modem using the at least one parameter" is anticipated by protection CMTS 14B (means) of Figure 3A that begins communication with cable modem 12 upon receipt of a dynamic channel change command and applies the received state information (using parameter) to all communication with the cable modem 12 as spoken of on column 7, lines 9-16. Lastly, "wherein the at least one parameter is supplied prior to a downstream channel between the second CMTS and the cable modem becoming invalid" is anticipated by the state information (parameters) received by protection CMTS 14B prior to the transmission of a dynamic change command spoken of on column 6, lines 42-46 as well as the dynamic channel change message transmission based on working CMTS failure spoken of column 7, lines 43-56.

Regarding claim 28, "wherein the at least one parameter is one from the group consisting of: a configuration file, a security association, DOCSIS version, concatenation support, payload header suppression, and multicasting support" is anticipated by the state information (configuration file) received by protection CMTS 14B prior to the transmission of a dynamic change command spoken of on column 6, lines 42-46.

Regarding claim 29, "wherein the at least one parameter is supplied from the second CMTS" is anticipated by communication module 27B of protection CMTS 14B of

Figure 3A that receives state information (parameters) pertaining to the cable modem from communication module 27A (second CMTS) of working CMTS 14A as spoken of on column 6, lines 42-50.

Regarding claim **31**, "wherein the at least one parameter is supplied from the cable modem" is anticipated by communication module 27B of protection CMTS 14B of Figure 3A that receives state information (parameters) pertaining to the cable modem from communication module 27A (second CMTS) of working CMTS 14A as spoken of on column 6, lines 42-50.

Regarding claim **34**, "wherein the at least one parameter is supplied over a channel different than the channel by which the cable modem was communicating with the second CMTS" is anticipated by the communication channel between communication modules 27A and 27B of Figure 3A used for transmitting state information (parameters).

Regarding claim **36**, "receiving as an input at least one parameter for cable modem service provided between a cable modem and a second CMTS which is initially serving the cable modem, the at least one parameter being established during initialization of the cable modem service between the cable modem and the second CMTS" is anticipated by communication module 27B of protection CMTS 14B of Figure 3A that receives state information (parameters) pertaining to the cable modem from communication module 27A of working CMTS 14A as spoken of on column 6, lines 42-50.

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"Establishing cable modem service between the first CMTS and the cable modem using the at least one parameter" is anticipated by protection CMTS 14B of Figure 3A that begins communication with cable modem 12 upon receipt of a dynamic channel change command and applies the received state information (using parameter) to all communication with the cable modem 12 as spoken of on column 7, lines 9-16. Lastly, "wherein the at least one parameter is one from the group consisting of: a configuration file, a security association, DOCSIS version, concatenation support, payload header suppression, and multicasting support" is anticipated by the state information (configuration file) received by protection CMTS 14B prior to the transmission of a dynamic change command spoken of on column 6, lines 42-46.

Regarding claim 37, "receiving as an input at least one parameter for cable modem service provided between a cable modem and a second CMTS which is initially serving the cable modem, the at least one parameter being established during initialization of the cable modem service between the cable modem and the second CMTS" is anticipated by communication module 27B of protection CMTS 14B of Figure 3A that receives state information (parameters) pertaining to the cable modem from communication module 27A of working CMTS 14A as spoken of on column 6, lines 42-50.

"Establishing cable modem service between the first CMTS and the cable modem using the at least one parameter" is anticipated by protection CMTS 14B of Figure 3A that begins communication with cable modem 12 upon receipt of a dynamic channel change command and applies the received state information (using parameter)

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to all communication with the cable modem 12 as spoken of on column 7, lines 9-16. Lastly, "wherein the at least one parameter is supplied from the second CMTS" is anticipated by communication module 27B of protection CMTS 14B of Figure 3A that receives state information (parameters) pertaining to the cable modem from communication module 27A (second CMTS) of working CMTS 14A as spoken of on column 6, lines 42-50.

Regarding claim **38**, "wherein the at least one parameter is supplied after failure of the second CMTS" is anticipated by steps 504 and 505 of Figure 5 which show CMTS2 obtaining state information after the transmission of a dynamic channel change message by CMTS1.

Regarding claim **39**, "wherein the at least one parameter is supplied prior to failure of the second CMTS" is anticipated by the state information (parameters) received by protection CMTS 14B prior to the transmission of a dynamic change command spoken of on column 6, lines 42-46 as well as the dynamic channel change message transmission based on working CMTS failure spoken of column 7, lines 43-56.

Regarding claim **40**, "wherein the at least one parameter is supplied over a channel different than the channel by which the cable modem was communicating with the second CMTS" is anticipated by the communication channel between communication modules 27A and 27B of Figure 3A used for transmitting state information (parameters).

Regarding claim **42**, "a memory for storing at least one parameter received by the cable modem as an input for cable modem service provided between a cable

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modem and a second CMTS which is initially serving the cable modem, the at least one parameter being established during initialization of the cable modem service between the cable modem and the second CMTS" is anticipated by protection CMTS 14B of Figure 3A containing memory 24B, that receives state information (parameters) pertaining to the cable modem from communication module 27A of working CMTS 14A as spoken of on column 6, lines 42-50.

"A processor for operating the first CMTS to establish cable modem service between the first CMTS and the cable modem using the at least one parameter" is anticipated by protection CMTS 14B of Figure 3A containing processor 22B, that begins communication with cable modem 12 upon receipt of a dynamic channel change command and applies the received state information (using parameter) to all communication with the cable modem 12 as spoken of on column 7, lines 9-16. Lastly, "an input port to receive the at least one parameter which is supplied via the second CMTS" is anticipated by communication module 27B (input port) of protection CMTS 14B of Figure 3A that receives state information (parameters) pertaining to the cable modem from communication module 27A of working CMTS 14A (second CMTS) as spoken of on column 6, lines 42-50.

Regarding claim **43**, "a receiver which receives the at least one parameter which is supplied from the cable modem" is anticipated by communication module 27B of protection CMTS 14B of Figure 3A that receives state information (parameters) pertaining to the cable modem from communication module 27A (second CMTS) of working CMTS 14A as spoken of on column 6, lines 42-50.

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### Claim Rejections - 35 USC § 103

- 9. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:
  - (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.
- 10. This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).
- 11. Claims **2**, **3**, **6-8**, **10**, **11**, **13**, and **15-18** are rejected under 35 U.S.C. 103(a) as being unpatentable over Daruwalla et al. (U.S. 6,839,829) ("Daruwalla").

Regarding claim 2, Daruwalla teaches registration parameters (upstream channel descriptor) for the protection CMTS that are obtained over the protection channel and stored by the cable modem as spoken of on column 10, lines 36-41. Daruwalla also teaches the cable modem detecting a failure as spoken of on column 14, lines 1-3. Daruwalla also teaches the cable modem connecting to the protection CMTS after loading previously stored protection path parameters from initial registration as spoken of on column 14, lines 5-12. Daruwalla also teaches how these registration parameters

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comprise upstream transmission frequency, upstream transmission power, time slots for upstream transmission, etc. as spoken of on column 10, lines 29-33. Daruwalla does not explicitly teach a modulation scheme being indicated in the registration parameters. However, it would be obvious to someone skilled in the art to include a type of modulation as one of the registration parameters in order to allow the cable modem to effectively communicate with the CMTS.

Regarding claim 3, Daruwalla further teaches registration parameters (upstream channel identifier) for the protection CMTS that are obtained over the protection channel and stored by the cable modem as spoken of on column 10, lines 36-41.

Regarding claim **6**, Daruwalla further teaches registration parameters (upstream channel identifier) for the protection CMTS that are obtained over the protection channel and stored by the cable modem as spoken of on column 10, lines 36-41. Daruwalla also teaches the transmission of a ranging request by the cable modem to the protection CMTS as spoken of on column 14, lines 48-55.

Regarding claim 7, Daruwalla further teaches the transmission of a ranging request by the cable modem to the protection CMTS as spoken of on column 14, lines 48-55.

Regarding claim **8**, Daruwalla further teaches the transmission of a ranging request by the cable modem to the protection CMTS upon failure as spoken of on column 14, lines 48-55.

Regarding claim **10**, Daruwalla teaches registration parameters (upstream channel descriptor) for the protection CMTS that are obtained over the protection

channel and stored by the cable modem containing memory 857' (Figure 8B) as spoken of on column 10, lines 36-41. Daruwalla also teaches a cable modem (tunable transmitter and receiver) containing processor 855' that connects to the protection CMTS after loading previously stored protection path parameters from initial registration as spoken of on column 14, lines 5-12. Daruwalla also teaches how these registration parameters comprise upstream transmission frequency, upstream transmission power, time slots for upstream transmission, etc. as spoken of on column 10, lines 29-33. Daruwalla does not explicitly teach a modulation scheme being indicated in the registration parameters. However, it would be obvious to someone skilled in the art to include a type of modulation as one of the registration parameters in order to allow the cable modem to effectively communicate with the CMTS.

Regarding claim 11, Daruwalla teaches registration parameters (upstream channel descriptor) for the protection CMTS that are obtained over the protection channel and stored by the cable modem (means) as spoken of on column 10, lines 36-41. Daruwalla also teaches the cable modem (means) detecting a failure as spoken of on column 14, lines 1-3. Daruwalla also teaches the cable modem (means) connecting to the protection CMTS after loading previously stored protection path parameters from initial registration as spoken of on column 14, lines 5-12. Daruwalla also teaches how these registration parameters comprise upstream transmission frequency, upstream transmission power, time slots for upstream transmission, etc. as spoken of on column 10, lines 29-33. Daruwalla does not explicitly teach a modulation scheme being indicated in the registration parameters. However, it would be obvious to someone

skilled in the art to include a type of modulation as one of the registration parameters in order to allow the cable modem to effectively communicate with the CMTS.

Regarding claim **13**, Daruwalla further teaches registration parameters (upstream channel identifier) for the protection CMTS that are obtained over the protection channel and stored by the cable modem as spoken of on column 10, lines 36-41.

Regarding claim **15**, Daruwalla further teaches the registration parameters for the protection CMTS obtained (ranging and registering) and stored by the cable modem in preparation for a cutover event as spoken of on column 10, lines 36-41.

Regarding claim **16**, Daruwalla further teaches registration parameters (upstream channel identifier) for the protection CMTS that are obtained over the protection channel and stored by the cable modem (means) as spoken of on column 10, lines 36-41.

Daruwalla also teaches the transmission of a ranging request by the cable modem (means) to the protection CMTS as spoken of on column 14, lines 48-55.

Regarding claim **17**, Daruwalla further teaches the transmission of a ranging request by the cable modem to the protection CMTS as spoken of on column 14, lines 48-55.

Regarding claim **18**, Daruwalla further teaches the transmission of a ranging request by the cable modem to the protection CMTS upon failure as spoken of on column 14, lines 48-55.

12. Claims **4 and 14** are rejected under 35 U.S.C. 103(a) as being unpatentable over Daruwalla et al. (U.S. 6,839,829) ("Daruwalla") in view of Sawyer et al. (U.S. 6,765,925) ("Sawyer").

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Regarding claim 4, Daruwalla teaches registration parameters (upstream channel descriptor) for the protection CMTS that are obtained over the protection channel and stored by the cable modem as spoken of on column 10, lines 36-41. Daruwalla also teaches the cable modem detecting a failure as spoken of on column 14, lines 1-3. Daruwalla also teaches the cable modem connecting to the protection CMTS after loading previously stored protection path parameters from initial registration as spoken of on column 14, lines 5-12. Daruwalla also teaches how these registration parameters comprise IP address, upstream transmission frequency, upstream transmission power, time slots for upstream transmission, etc. as spoken of on column 10, lines 27-33. Daruwalla does not explicitly teach using registration parameters (IP address, transmit power level, configuration file) used on the primary downstream channel when initially communicating via the alternative downstream channel.

However, Sawyer teaches how state information (registration parameters) established between working CMTS 14A and cable modem 12 of Figure 3A is provided to protection CMTS 14B so that upon switchover, cable modem 12 can experience seamless continuing communication with head end 16 as spoken of on column 7, lines 9-16. Sawyer also teaches on column 3, lines 2-5 how the state information relates to bandwidth, QoS, throughput, security, SLA, policy data, etc. At the time of the invention, it would have been obvious to someone skilled in the art to combine registration parameter teachings of Daruwalla with the registration parameter teachings of Sawyer in order to provide seamless continuing communication between cable modem 12 and head end 16 as spoken of on column 7, lines 9-16 of Sawyer.

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Regarding claim **14**, Daruwalla teaches the cable modem of claim **11**. Daruwalla does not explicitly teach using registration parameters (IP address, transmit power level, configuration file) used on the primary downstream channel when initially communicating via the alternative downstream channel.

However, Sawyer teaches how state information (registration parameters) established between working CMTS 14A and cable modem 12 of Figure 3A is provided to protection CMTS 14B so that upon switchover, cable modem 12 can experience seamless continuing communication with head end 16 as spoken of on column 7, lines 9-16. Sawyer also teaches on column 3, lines 2-5 how the state information relates to bandwidth, QoS, throughput, security, SLA, policy data, etc. At the time of the invention, it would have been obvious to someone skilled in the art to combine registration parameter teachings of Daruwalla with the registration parameter teachings of Sawyer in order to provide seamless continuing communication between cable modem 12 and head end 16 as spoken of on column 7, lines 9-16 of Sawyer.

### Response to Arguments

13. Applicant's arguments with respect to claims 2-5, 7, 10, 12-15, 17, 20, 25, 28-30, 33, 36, 37, 39, and 42 have been considered but are moot in view of the new ground(s) of rejection.

#### Conclusion

14. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. Dhara et al. (U.S. 6,879,582) is also pertinent to this application.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Michael J. Moore, Jr. whose telephone number is (571) 272-3168. The examiner can normally be reached on Monday-Friday (8:30am - 5:00pm).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Seema S. Rao can be reached at (571) 272-3174. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Michael J. Moore, Jr. Examiner

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FRANK DUONG
PRIMARY EXAMINER